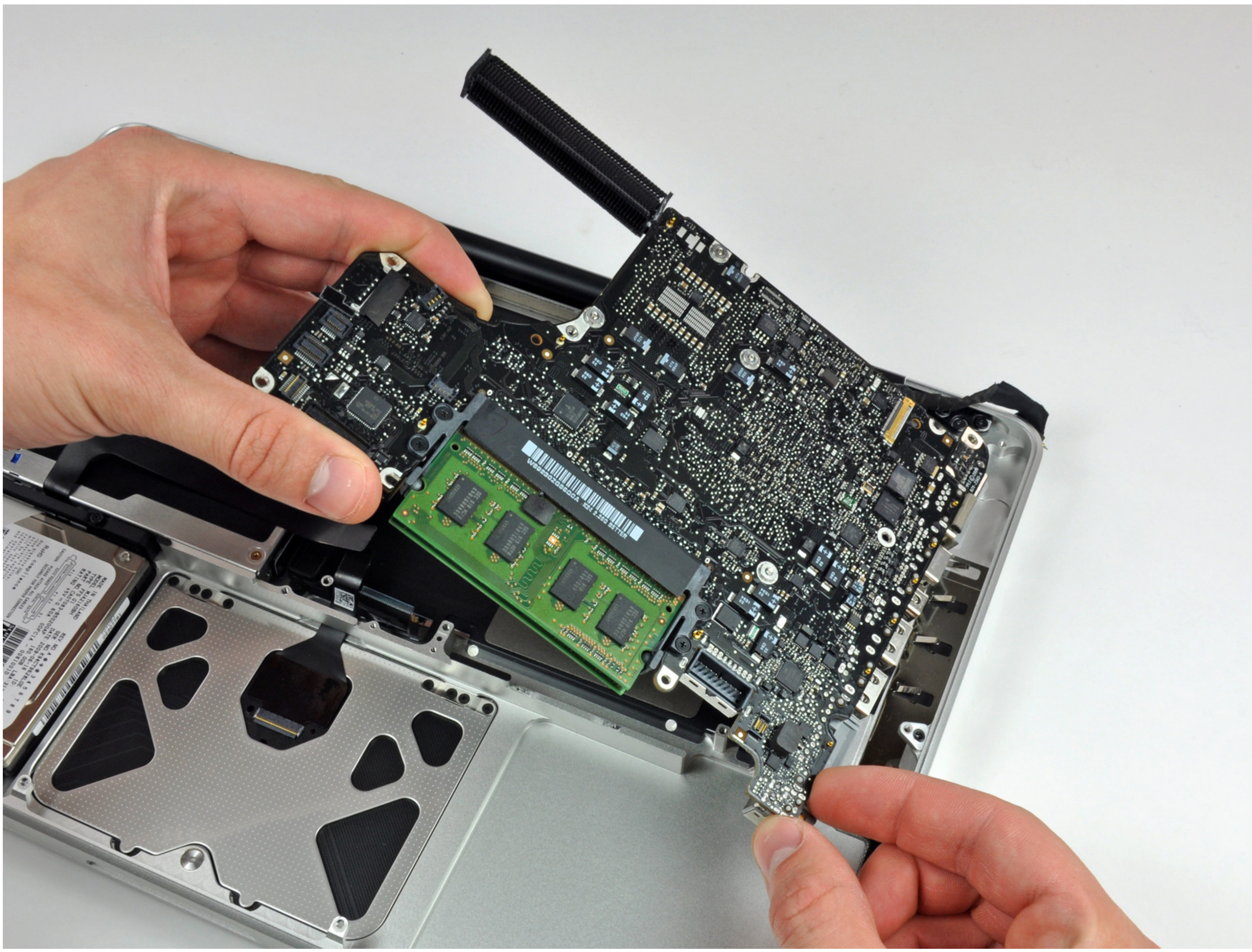
MacBook Pro 13" Unibody Mid 2009 Logic Board Replacement

Written By: Walter Galan



INTRODUCTION

Use this guide to completely replace your logic board.

TOOLS:

- Arctic Silver ArctiClean (1)
- Arctic Silver Thermal Paste (1)
- Phillips #00 Screwdriver (1)
- Spudger (1)
- Tri-point Y0 Screwdriver (1)

PARTS:

- MacBook Pro 13" Unibody 2.53 GHz Logic Board (1)
- MacBook Pro 13" Unibody 2.26 GHz Logic Board (1)

Step 1 — Lower Case



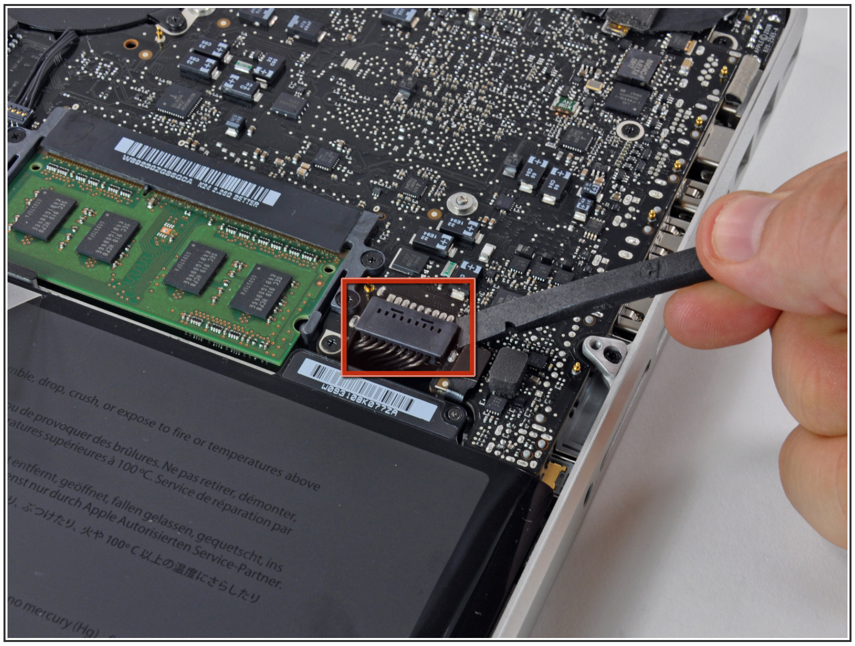
- Remove the following 10 screws securing the lower case to the MacBook Pro 13" Unibody:
  - Seven 3 mm Phillips screws.
  - Three 13.5 mm Phillips screws.

Step 2



- Slightly lift the lower case and push it toward the rear of the computer to free the mounting tabs.

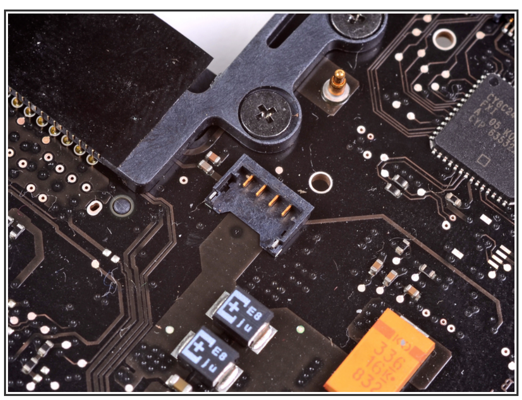
Step 3 — Battery

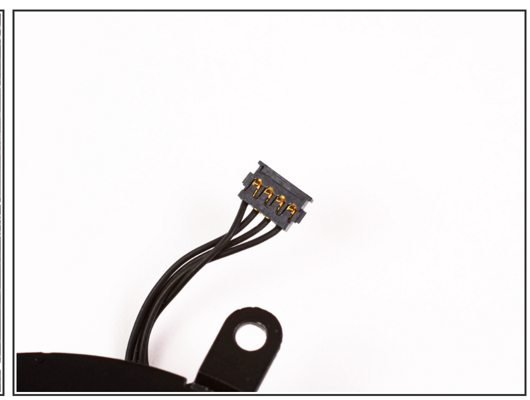


- ⚠ For precautionary purposes, we advise that you disconnect the battery connector from the logic board to avoid any electrical discharge.
- Use the flat end of a spudger to lift the battery connector up out of its socket on the logic board.

Step 4 — Fan







- Use a spudger to pry the fan connector out of its seat, and straight up off the logic board.
- ⓘ It is useful to twist the spudger axially from beneath the fan cable wires to release the connector.
- ⚠ The fan socket and the fan connector can be seen in the second and third pictures. Be careful not to break the plastic fan socket off the logic board as you use your spudger to lift the fan connector straight up and out of its socket. The layout of the logic board shown in the second picture may look slightly different than your machine but the fan socket is the same.

Step 5



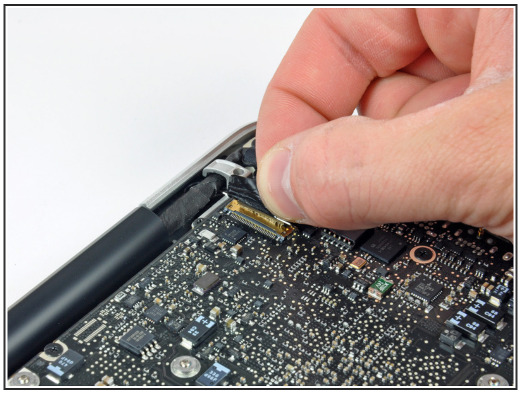
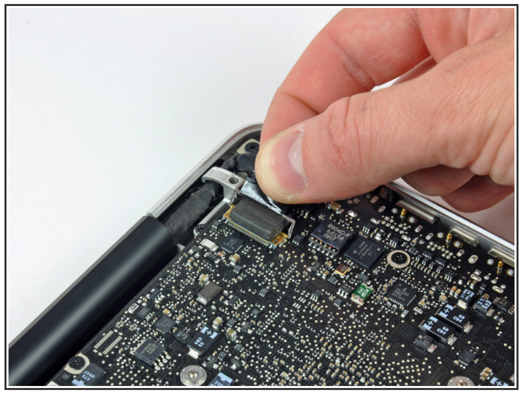
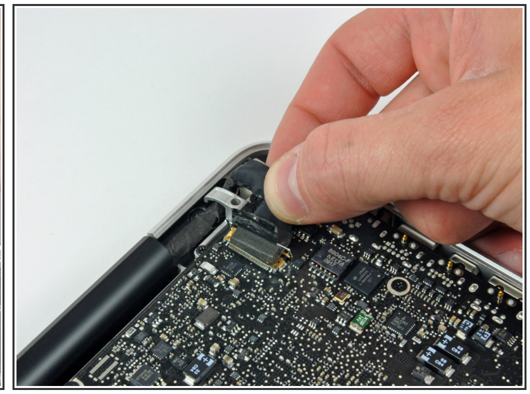
- Remove the following three screws securing the fan to the upper case:
  - One 6.5 mm Phillips.
  - One 5.5 mm Phillips.
  - One 4.5 mm Phillips.

Step 6



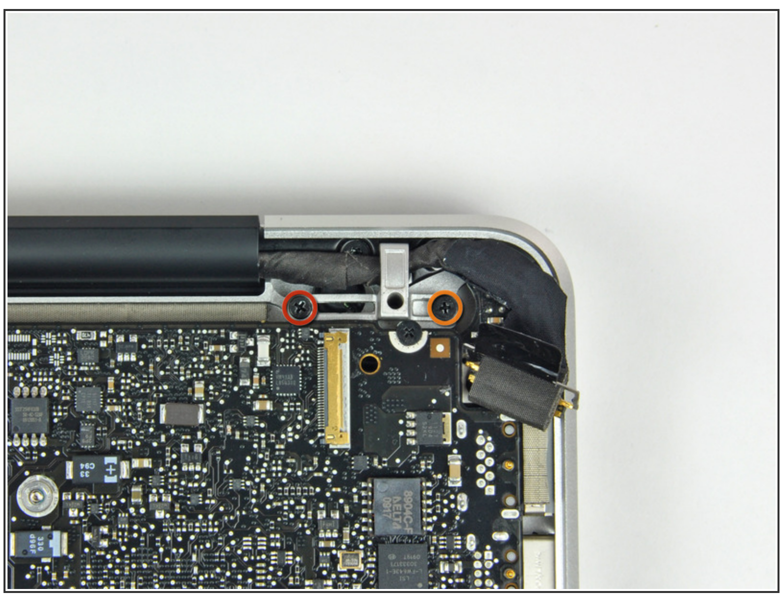
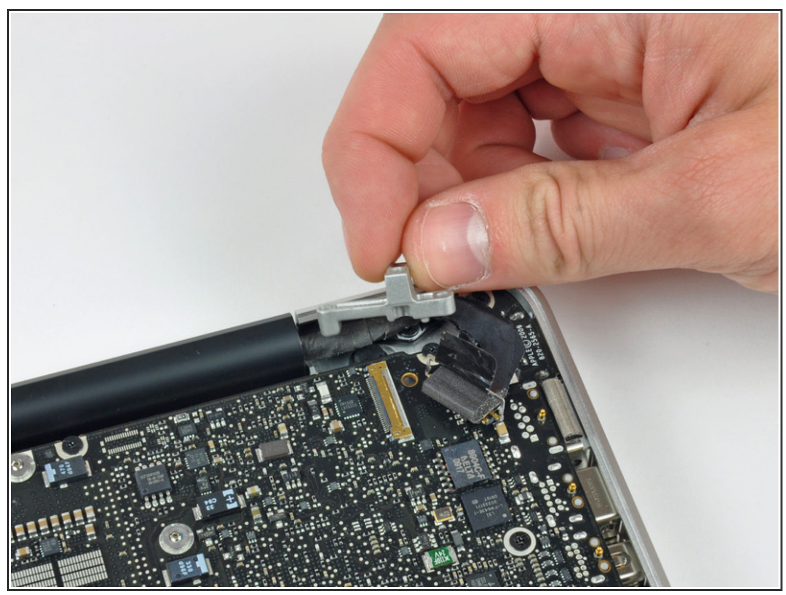
- Lift the fan out of the upper case.

Step 7 — Logic Board

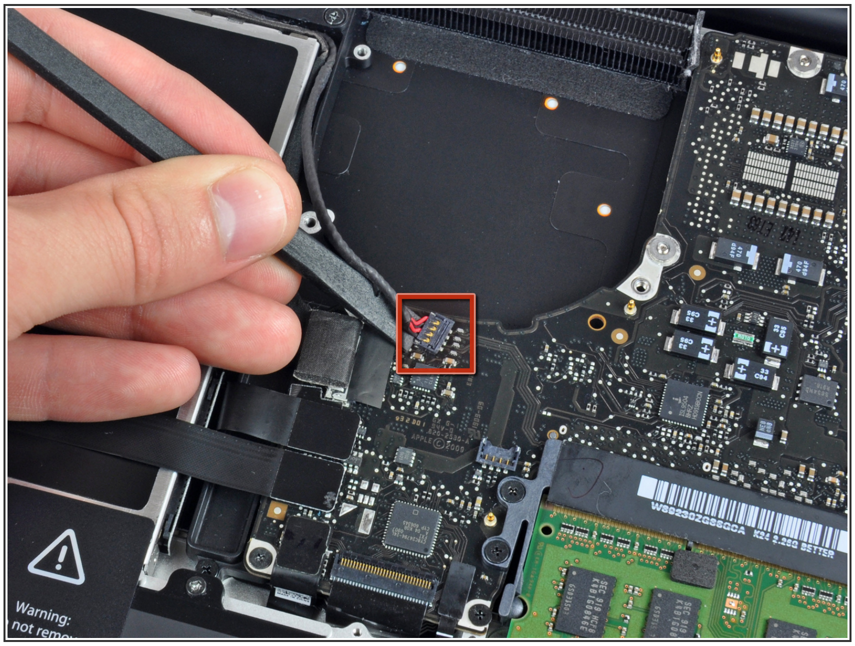
- Grab the plastic pull tab secured to the display data cable lock, and rotate it toward the DC-in side of the computer.
- Pull the display data cable connector straight away from its socket, towards the DC-in side of the computer.

Step 8

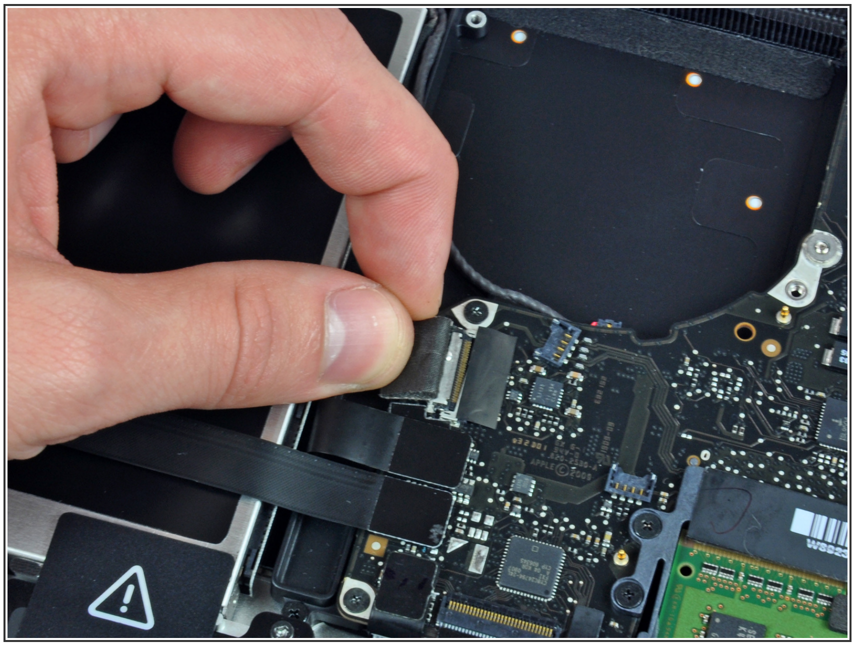
- Remove the following two screws securing the display data cable bracket to the upper case:
  - One 7 mm Phillips.
  - One 5 mm Phillips.
- Lift the display data cable bracket out of the upper case.

Step 9



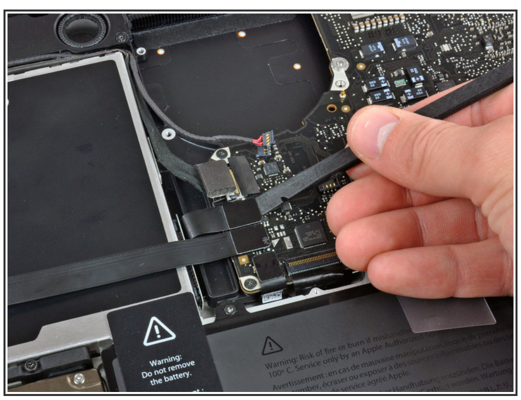
- Use the flat end of a spudger to pry the subwoofer and right speaker connector up off the logic board.

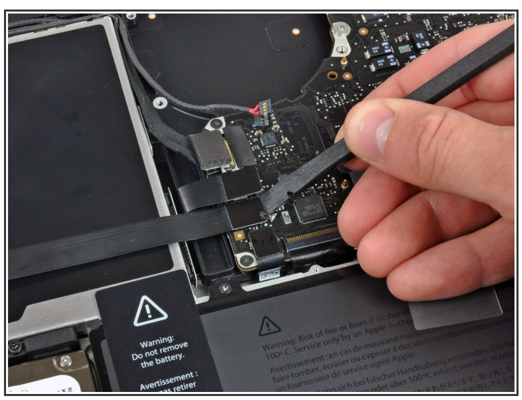
Step 10

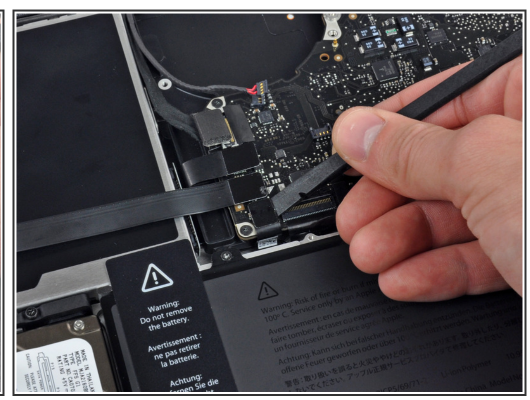


- In this step you will disconnect the camera cable. Most machines will have a small self adhesive plastic retainer stuck to the logic board to keep the connector in place. Before disconnecting the cable, be sure this retainer is moved out of the way.
- Pull the camera cable connector toward the optical drive to disconnect it from the logic board.
- This socket is metal and easily bent. Be sure to align the connector with its socket on the logic board before mating the two pieces.

Step 11

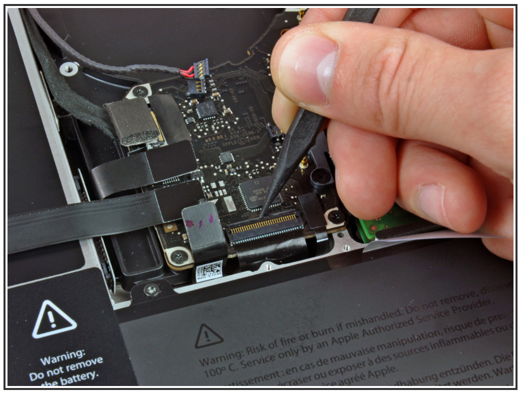


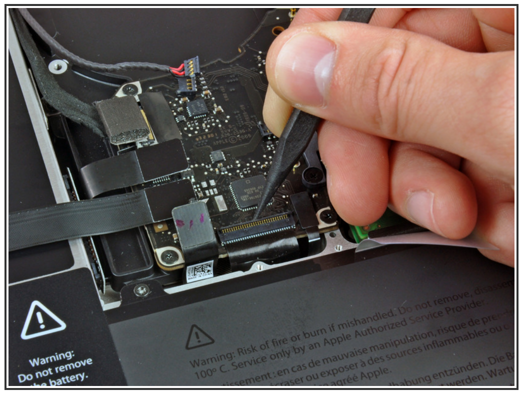


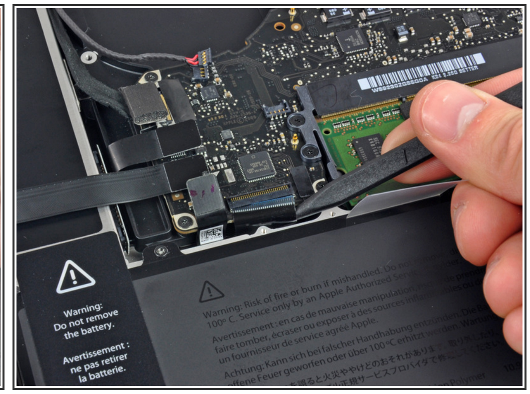


- Use the flat end of a spudger to pry the optical drive, hard drive, and trackpad cable connectors up off the logic board.

Step 12

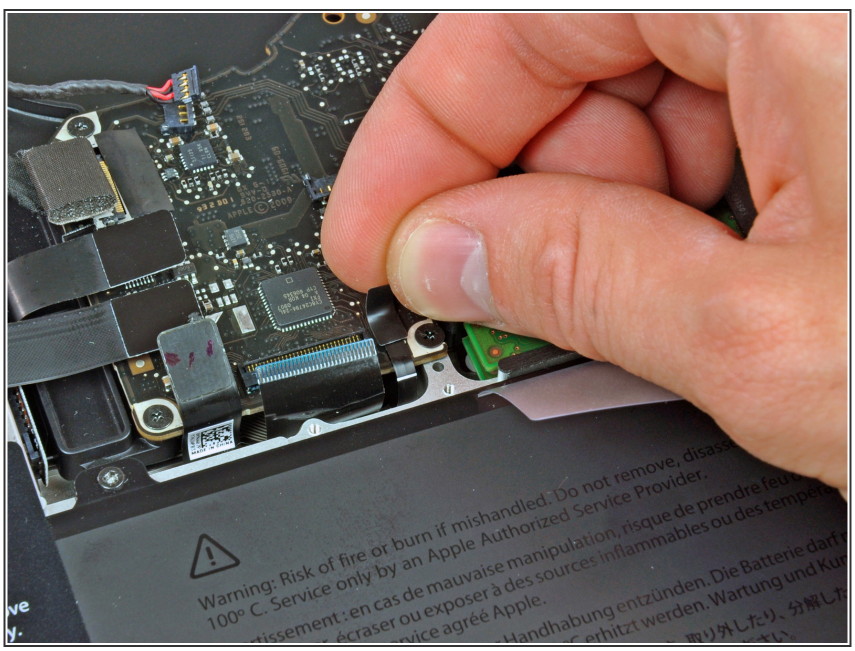






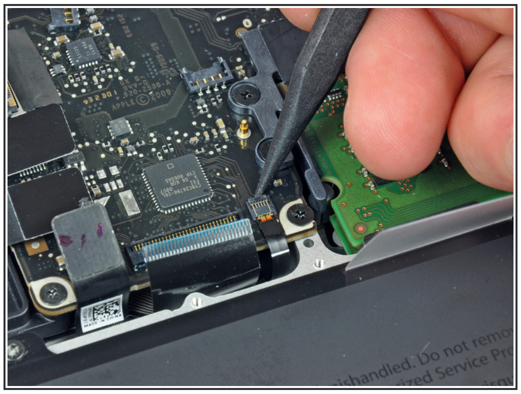
- Use your fingernail or the tip of a spudger to flip up the cable retaining flap on the ZIF socket for the keyboard ribbon cable.
- Use your spudger to slide the keyboard ribbon cable out of its socket.

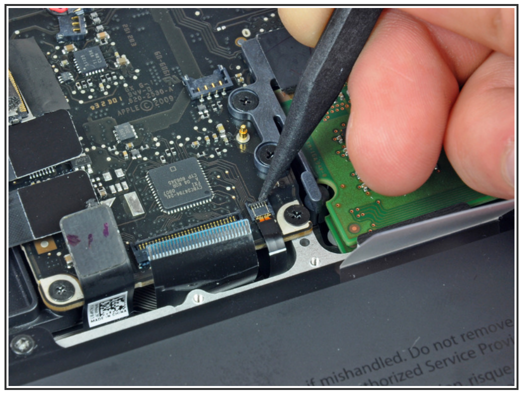
Step 13

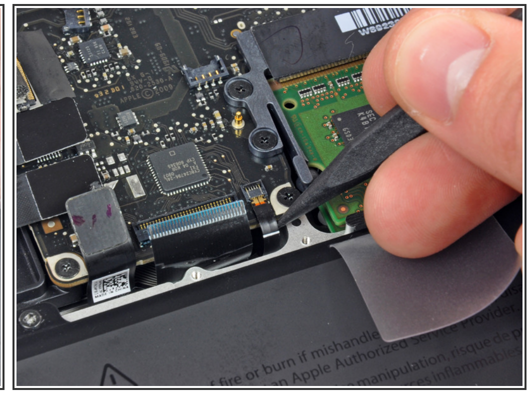


- Peel the small strip of black tape off the keyboard backlight ribbon cable socket.

Step 14

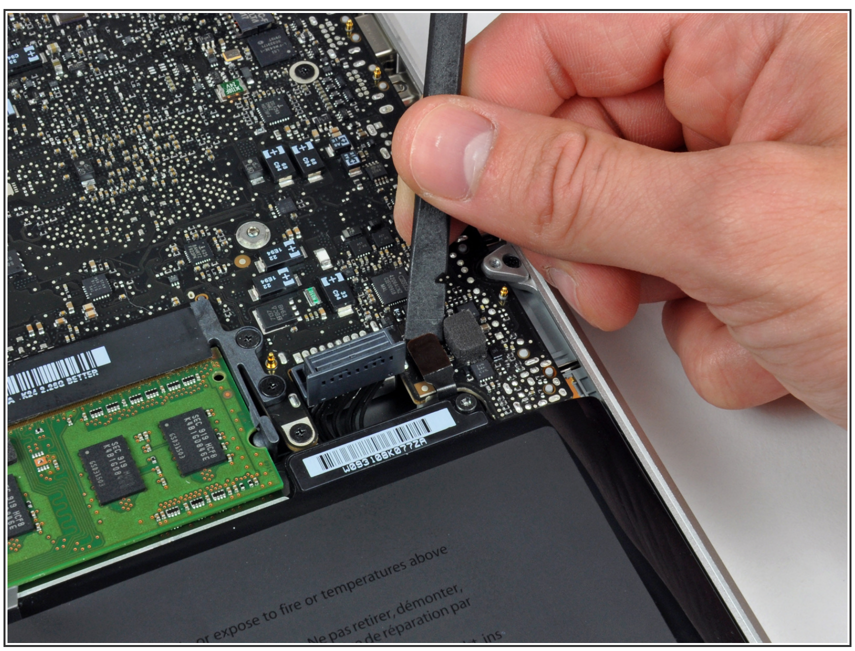






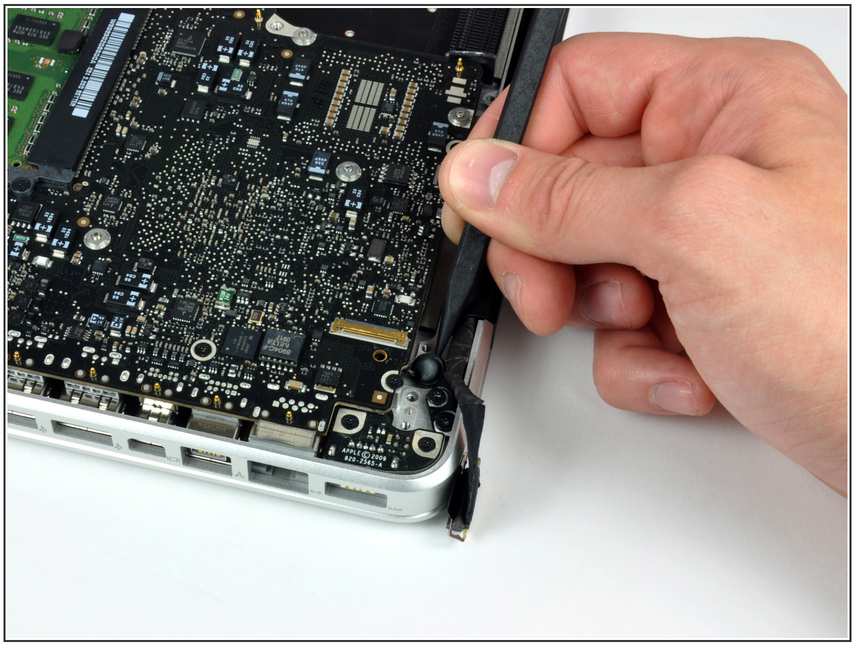
- Use the tip of a spudger to flip up the cable retaining flap on the ZIF socket for the keyboard backlight ribbon cable.
- Use your spudger to slide the keyboard backlight ribbon cable out of its socket.

Step 15



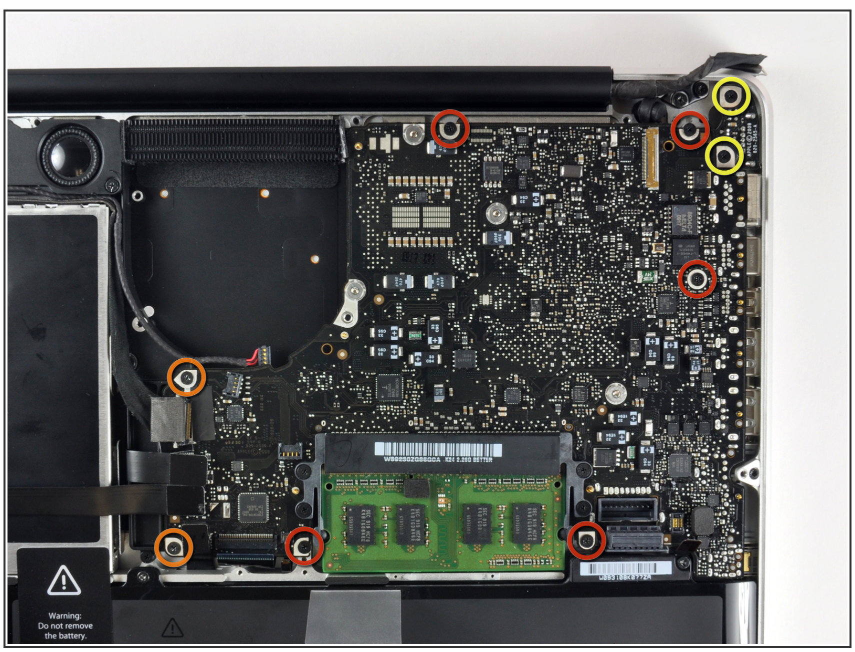
- Use the flat end of a spudger to pry the battery indicator cable connector up off the logic board.

Step 16



- Use the tip of a spudger to pry the microphone off the adhesive attaching it to the upper case.

Step 17



- Remove the following screws:
  - Five 3.1 mm Phillips.
  - Two 3.9 mm Phillips.
  - Two 7 mm Phillips from the DC-in board.

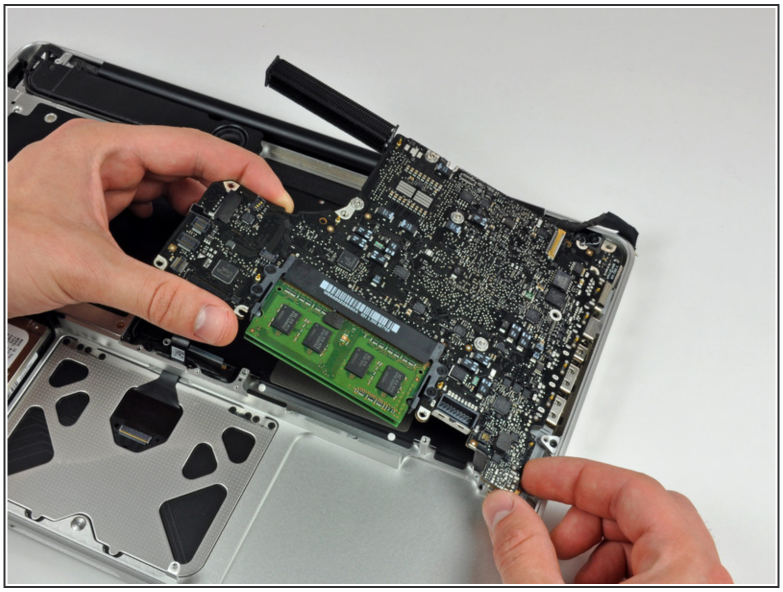
Step 18

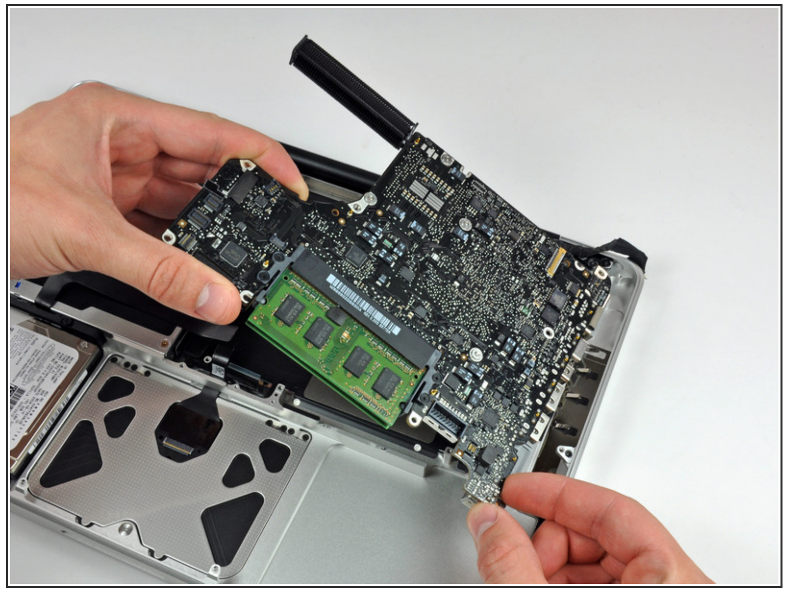




- Remove the following Tri-point screws securing the battery to the upper case:
  - One 5.5 mm Tri-point screw.
  - One 13.5 mm Tri-point screw.
- Lift the battery out of the upper case.

Step 19

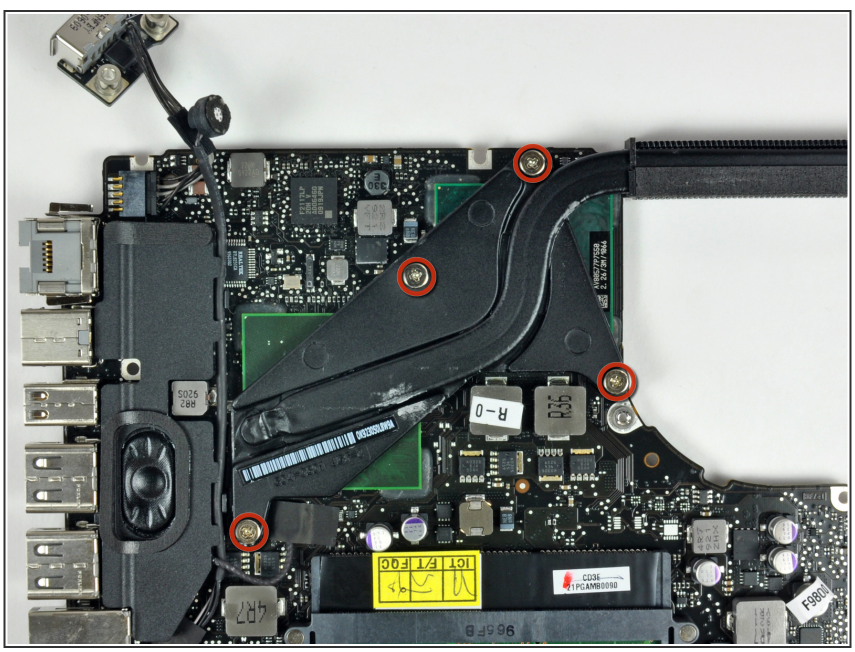




- Lift the logic board from its left edge and raise it until the ports clear the side of the upper case.
- Pull the logic board away from the side of the upper case and remove it, minding the DC-in board that may get caught.

⚠ Be careful not to rip out the fragile connector plug of the microphone assembly.

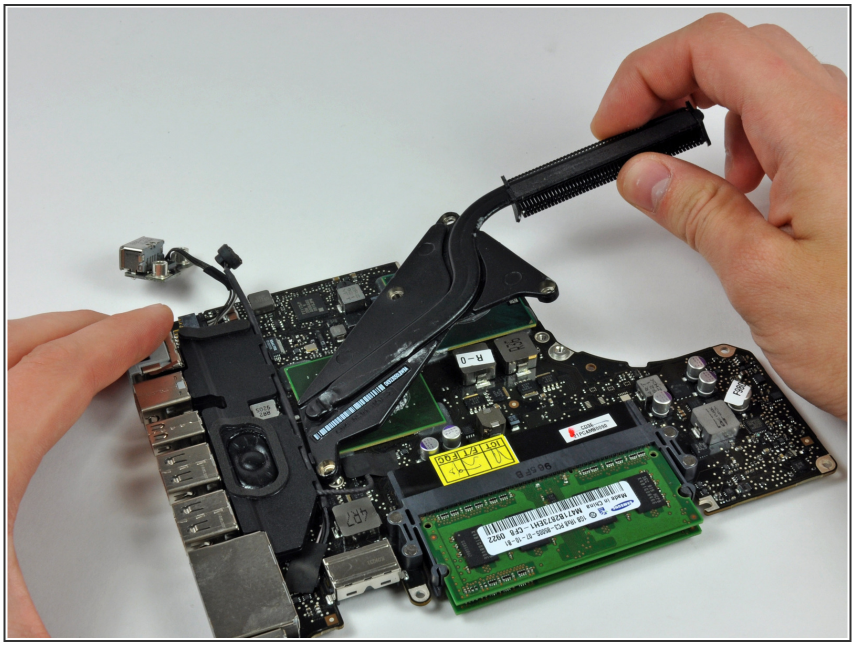
Step 20 — Heat Sink



- Remove the four 8.5 mm Phillips screws securing the heat sink to the logic board.

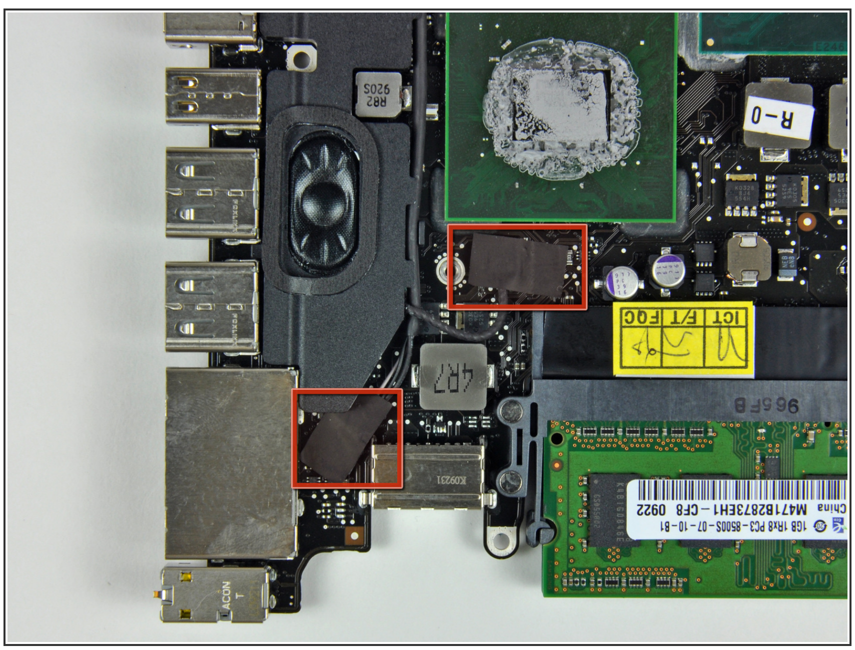
ⓘ A spring is held under each of these screws.

Step 21



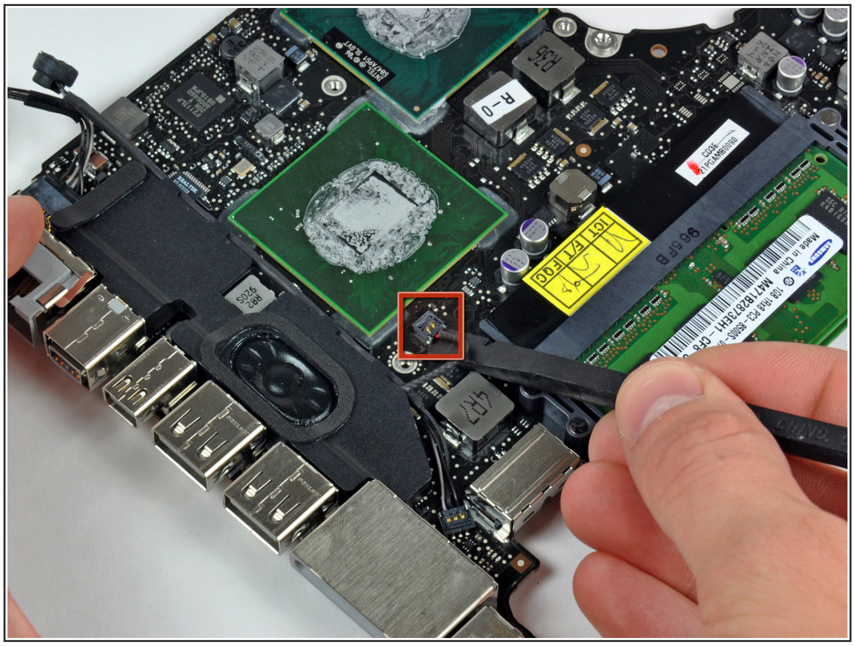
- Gently lift the heat sink off the logic board.
- When you mount the heat sink back onto the logic board, be sure to apply a new layer of thermal paste. We have a guide that makes replacing the thermal paste easy.

Step 22 — Logic Board



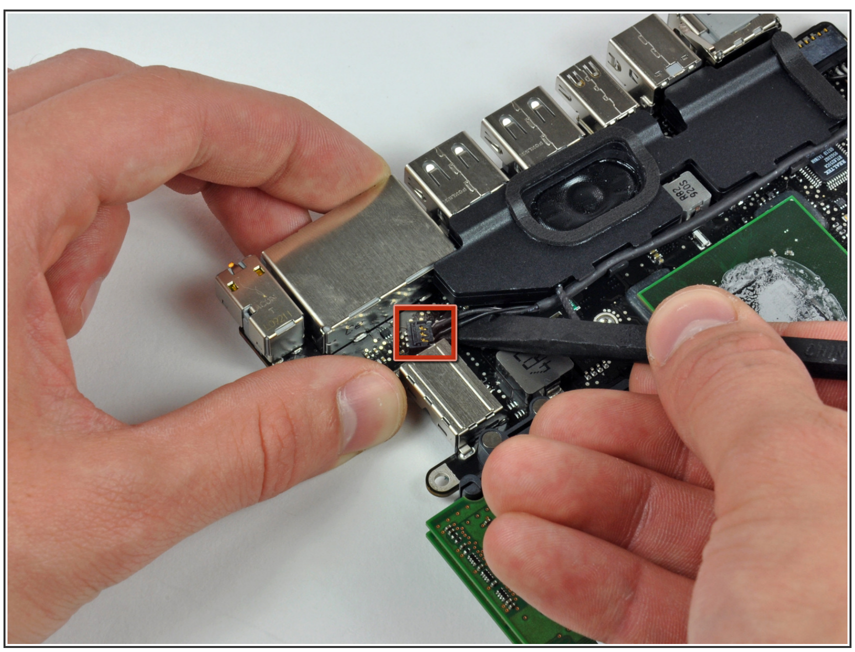
- Peel off the tape covering the microphone cable connector and left speaker cable connector.

Step 23



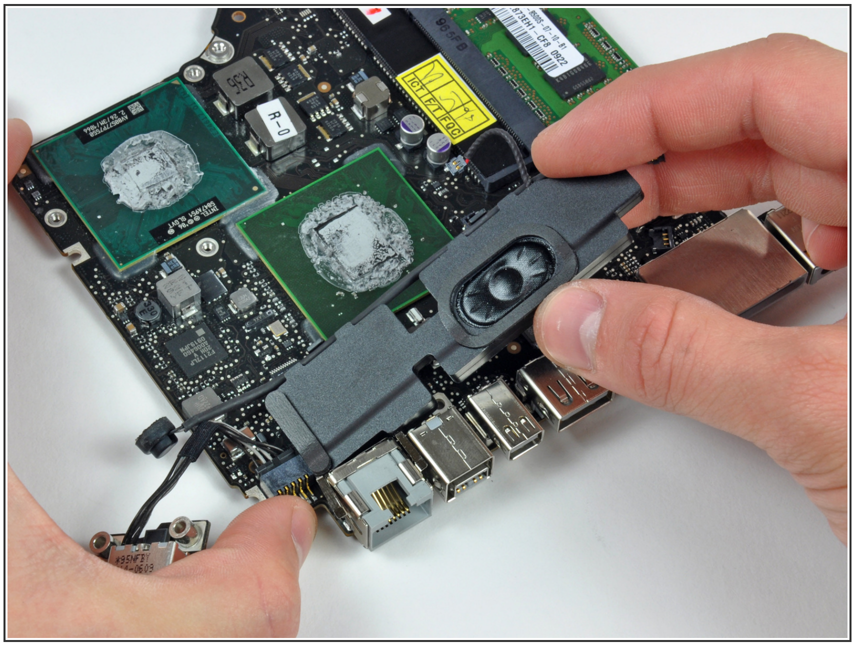
- Use the flat end of a spudger to pry the left speaker connector up off the logic board.

Step 24



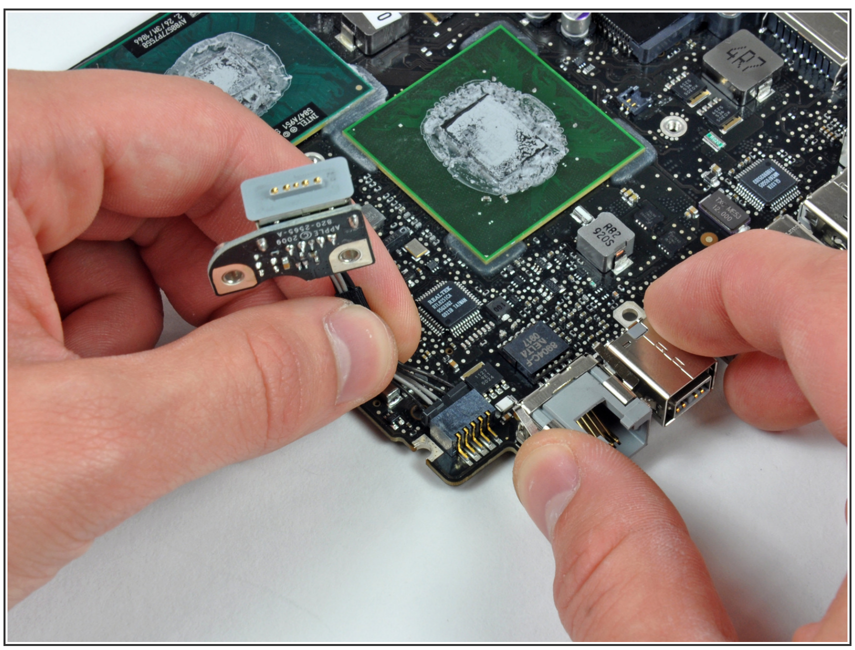
- Use the flat end of a spudger to pry the microphone cable connector up off the logic board.

Step 25



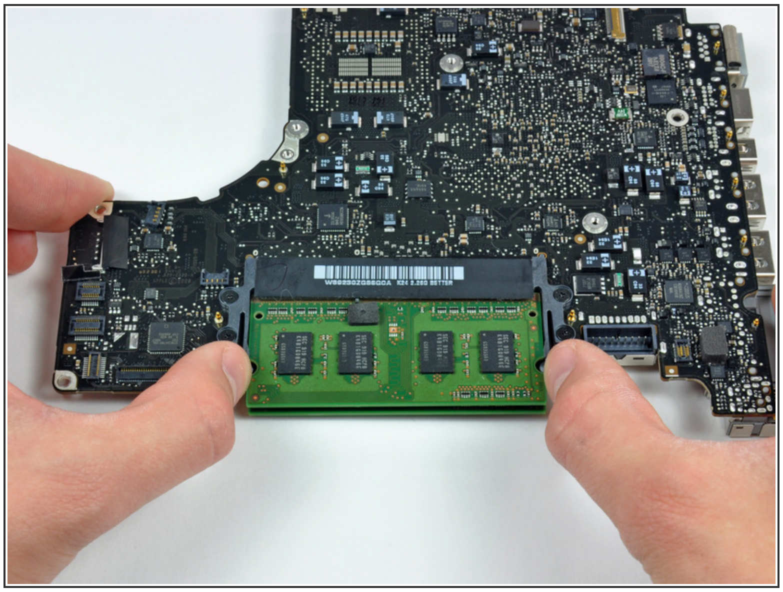
- Carefully peel the left speaker/microphone assembly off the adhesive securing it to the logic board.

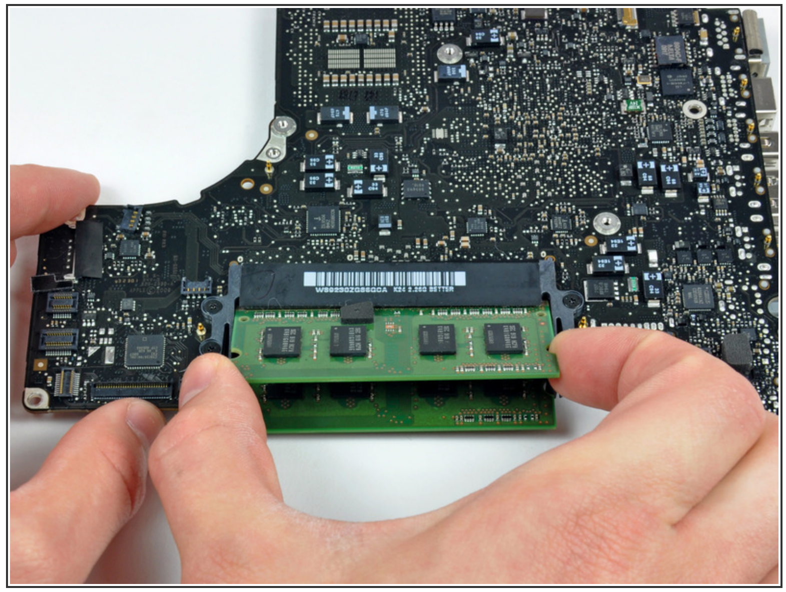
Step 26



- Disconnect the DC-In board by pulling its connector away from the socket on the logic board.

Step 27





- Release the tabs on each side of the chip by simultaneously pushing each tab away from the RAM.
- ⓘ These tabs lock the chip in place and releasing them will cause the chip to "pop" up.
- After the RAM chip has popped up, pull it straight out of its socket.
- ⓘ Repeat this process if a second RAM chip is installed.
- Logic board remains.

To reassemble your device, follow these instructions in reverse order.

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